

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Confirmation No.: 2828

Arnold Stamler, et al

Examiner: Goodchild, W. J.

Serial No.: 10/663,161

Group Art Unit: 2445

Filed on: September 15, 2003

For: METHOD PROVIDING A SINGLE CONSOLE CONTROL POINT FOR A NETWORK
DEVICE CLUSTER

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLY TO OFFICE ACTION

In reply to the Office Action mailed October 15, 2009, the shortened statutory period for which runs until January 15, 2010, please reconsider the subject application in light of the remarks herein.

I. ISSUES RELATING TO ALLEGED PRIOR ART

A. CLAIMS 1, 3-7 AND 26-32 -- § 103: MITTAL, BRUCKERT, TALLURI

Claims 1, 3-7 and 26-32 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mittal et al. U.S. Patent No. 7,076,645 ("Mittal"), in view of Bruckert et al. U.S. Patent Publication 2002/0049859 ("Bruckert"), and in further view of Talluri et al. U.S. Patent No. 6,748,429 ("Talluri"). (Office Action, page 2) The rejection is respectfully traversed.

CLAIM 1

Claim 1 recites:

1. A method, comprising the computer-implemented steps of:
 - receiving, at a single console control point for a network device cluster, user input specifying an operation to perform **concurrently on a plurality of active routers in the cluster as a whole**; and
 - automatically **and concurrently performing the specified operation on active routers in a plurality of active routers in the cluster by transforming the specified operation into one or more device-specific operations for each of the active routers in the plurality of active routers**;

wherein the user input specifies a configuration command for the cluster;
automatically **and concurrently** communicating the configuration command to each of
the active routers in the plurality of active routers;
further wherein the cluster comprises a first switch device, the plurality of active routers,
one or more standby routers, and a second switch device.

Claim 1 recites that user input is received at a single console control point for the network device cluster. The user input specifies an operation to be “performed concurrently on a plurality of active routers in the cluster as a whole.” The user input specifies an operation, i.e. a configuration command, to be performed only on active routers in the cluster, but not on the remaining devices in the cluster, such as servers, switches or standby routers. The configuration command, is “concurrently communicated to each of the active routers in the plurality of active routers,” and is concurrently performed on all active routers. The specified operation is concurrently performed by transforming the specified operation into device-specific operations for each of the active routes in the plurality of the active routers.

It is well founded that to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), the references cited and relied upon must teach or suggest all the claim limitations. In addition, a sufficient factual basis to support the obviousness rejection must be proffered. *In re Freed*, 165 USPQ 570 (CCPA 1970); *In re Warner*, 154 USPQ 173 (CCPA 1967); *In re Lunsford*, 148 USPQ 721 (CCPA 1966). With respect to the present application, it is respectfully submitted that Mittal, Bruckert and Talluri, individually or in combination, do not describe or suggest all the limitations of Claim 1. It is further submitted that a sufficient factual basis has not been proffered in the Office Action to support the rejection of Claim 1 under 35 U.S.C. §103(a).

The Office Action acknowledges that Mittal fails to describe “concurrently on a plurality of active routers in the cluster as a whole,” recited in Claim 1. (Office Action, pages 3-4) However, the Office Action alleges that because Bruckert describes a system comprising switches and routers and Talluri describes modifying the configuration of all the nodes in a cluster, the feature of “concurrently modifying a plurality of active routers in the cluster as a

whole,” recited in Claim 1, would have been obvious. (Office Action: page 4) This is incorrect.

Bruckert describes a cluster of network devices (Bruckert: Para [27]), but **does not describe that active routers in the cluster are treated as a whole** for any purpose and thus, separately from the remaining devices in the cluster, such as switches, etc. There is no teaching in Bruckert about a single console control point that receives user input specifying an operation to be performed only on a plurality of active routers as a whole, as claimed, but not on the remaining devices.

Further, Bruckert has no suggestion to transform a specified operation into device-specific operations to be performed only on the active routers in a cluster, as claimed. Moreover, Bruckert does not describe “concurrently communicating a configuration command to each of the active routers,” as claimed, but not to the remaining devices. Therefore, Bruckert does not cure the deficiencies of Mittal with respect to the configuration command that is 1) concurrently transformed into one or more device specific operations for each of the active routers, 2) concurrently communicated to each of the active routers and only to each of the active routers, and 3) concurrently performed on only active routers in the clusters as a whole, as recited in Claim 1.

Talluri does not cure the deficiencies of Mittal and Bruckert with respect to the configuration command performed concurrently on the active routers and only on the active routers, as recited in Claim 1. Talluri describes a cluster of nodes which are employed to perform computational tasks. (Talluri: Col. 1, ll. 53-54) In particular, Talluri’s cluster comprises client computers and servers, wherein the client computers access information contained in databases stored on the servers. (Talluri: Col. 1, ll. 41-45) In Talluri, a node can be either a client computer or a server and the node is configured to perform one or more computing tasks. (Talluri: Col. 1, ll. 54-55) However, Talluri fails to describe “performing the specified operation on active routers ... as a whole,” as recited in Claim 1. Talluri dynamically reconfigures some, but not necessarily all nodes in the cluster, and the distinction which nodes are reconfigured

depends on whether a particular node needs to be reconfigured (Talluri: Col. 8, ll. 10-12), **not whether the particular node is an active router**, as recited in Claim 1. Talluri describes a cluster configuration repository (CCR) that can be shared between the nodes and that contains a description of the cluster topology. (Talluri: Col. 5, ll. 64-65) Each node in Talluri may make a copy of the shared CCR (Talluri: Col. 5, ll. 18-20), make changes to the copy of the CCR and upon approval, write the current configuration information to the shared CCR, which then can be copied to other nodes. Reconfiguration in Talluri pertains to changing the topology of the computational cluster, but not to performing the a device configuration command on active routers... as a whole, as recited in Claim 1.

Talluri does not concurrently perform an operation on active routers by transforming the specified operation into one or more device-specific operations for each of the active routers, as recited in Claim 1. The Office Action alleges that Talluri describes the above feature because in column 6 (ll. 47-49) Talluri describes a callback function which is executed on all the nodes in the cluster when the configuration file in the CCR is updated. (Office Action: page 4) This is incorrect. The callback in Talluri pertains to informing all nodes in the cluster that the configuration of the cluster is changed and that the nodes should update their copies of the CCR. (Talluri: Col. 6, ll. 47-55) However, Talluri's callback is not a device-specific operation specified in the user's input, as recited in Claim 1. In Talluri, a user input is a configuration change performed at a particular node on the particular copy of the CCR, not the callback notification sent to all the nodes to update their copies of the CCR.

In Talluri, the user's input is not "transformed into one or more device-specific operations for each of the active routers," as recited in Claim 1. In Talluri, a notification to all nodes is sent when the particular change is approved (Talluri: Col. 4, ll. 10-14). However, the change itself is not concurrently communicated to each of the active nodes. In Talluri, each node implements the changes on its own and according to own time schedule, not by transforming the specified operation sent concurrently to all the nodes. In addition, as described above, since Talluri does not describe performing operations only on active routers, the

notification is sent to all the nodes, not to the routers, as recited in Claim 1.

The Office Action alleges that it would have been obvious to combine Mittal and Bruckert with Talluri's approach for concurrent modification of the nodes within a cluster in order to make updates to all nodes so that none of the nodes or transactions is out of sync. (Office Action: page 4) This is incorrect. Even in combination, Mittal, Bruckert and Talluri do not provide the claimed approach. A combination may provide a method for rebooting all nodes in the cluster (Mittal) including all switches, routers and servers (Bruckert) and updating the configuration information for all the nodes after the change is performed (Talluri). However, no combination provides an approach for concurrently performing the specified operation on active routers in a plurality of active routers by transforming the specified operation into ... device-specific operations ... concurrently communicated to each of the active routers, as recited in Claim 1.

Therefore, Mittal, Bruckert and Talluri, individually or in combination, fail to describe or suggest the whole subject matter recited in Claim 1.

Reconsideration and withdrawal of the rejection is respectfully requested.

CLAIM 26

Claim 26 recites features similar to those in Claim 1. Therefore, applicants believe that Claim 26 is patentable over Mittal and Bruckert, individually or in combination, for the same reasons discussed for Claim 1.

Reconsideration and withdrawal of the rejection is respectfully requested.

B. CLAIMS 8-23 -- § 103: MITTAL, BRUCKERT, TALLURI, JOHN

Claims 8-23 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mittal-Bruckert-Talluri as applied to Claim 1 above, and further in view of John et al. U.S. Patent Publication 2004/0088412 ("John"). (Office Action: page 6) The rejection is respectfully traversed.

Claims 8-23 depend from Claim 1. As discussed above, Mittal-Bruckert-Talluri, individually or in combination, fail to describe or suggest at least one feature recited in Claim 1.

Further, John does not cure the deficiencies of Mittal, Bruckert and Talluri with respect to Claim 1 because John does not describe “automatically performing the specified operation on a plurality of active members in the cluster by transforming the specified operation into one or more device-specific operations for each of the plurality of active members,” recited in Claim 1. Therefore, Mittal, Bruckert, Talluri and John, individually and in combination, fail to disclose the whole subject matter of Claim 1. Therefore, and due to claim dependency, Mittal, Bruckert, Talluri and John, individually or in combination, fail to disclose the whole subject matter of Claims 8-23.

Reconsideration and withdrawal of the rejection is respectfully requested.

C. CLAIM 35 -- § 103: MITTAL, BRUCKERT, JOHN, HSU

Claim 35 is rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mittal-Bruckert –Talluri-John as applied to Claim 1 above, and further in view of Hsu et al. U.S. Patent Publication 2001/0021198 (“Hsu”). (Office Action: page 11) The rejection is respectfully traversed.

Claim 35 depends from Claim 1. As discussed above, Mittal-Bruckert-Talluri, individually or in combination, fail to describe or suggest at least one feature recited in Claim 1. Further, John and Hsu do not cure the deficiencies of Mittal, Bruckert and Talluri with respect to Claim 1 because John and Hsu do not describe “receiving, at a single console control point for a network device cluster, user input specifying an operation to perform on the cluster as a whole,” and “automatically performing the specified operation on a plurality of active members in the cluster by transforming the specified operation into one or more device-specific operations for each of the plurality of active members,” recited in Claim 1. Therefore, Mittal, Bruckert, Talluri, John and Hsu, individually or in combination, fail to disclose the whole subject matter of Claim 1. Therefore, and due to claim dependency, Mittal, Bruckert, Talluri, John and Hsu, individually or in combination, fail to disclose the whole subject matter of Claim 35.

Reconsideration and withdrawal of the rejection is respectfully requested.

D. DEPENDENT CLAIMS

The claims that are not discussed above depend directly or indirectly on the claims that have been discussed. Therefore, those claims are patentable for the reasons given above. In addition, each of the dependent claims separately introduces features that independently render the claim patentable. However, due to the fundamental differences already identified, and to expedite positive resolution of the examination, separate arguments are not provided for each of the dependent claims at this time.

III. CONCLUSION

For the reasons set forth above, all of the pending claims are in condition for allowance. A petition for extension of time is hereby made to the extent necessary to make this reply timely filed. If any applicable fee is missing or insufficient, the Commissioner is authorized to charge any applicable fee to our Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Dated: January 7, 2010

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